

We Claim:

1 1. A device for controlling one or more memory modules, comprising:
2 a first memory module with a temperature sensor for detecting the temperature of
3 the first memory module, the temperature sensor being arranged in the first memory
4 module;
5 a second memory module with a second temperature sensor for detecting the
6 temperature of the second memory module, the second temperature sensor being arranged
7 in the second memory module;
8 a means for determining a highest temperature; and
9 a memory control module, the memory control module being connected to the
10 first and second memory modules via the means for determining the highest temperature,
11 the memory control module being designed such that an adaptation operation is initiated,
12 if the highest temperature exceeds a predetermined value.

1 2. The device as claimed in claim 1, wherein the first and second memory
2 modules having pulse width coders, the pulse width coders generating pulse-width-coded
3 temperature signals, the signals being connected upstream of the means for determining
4 the highest temperature,
5 the means for determining the highest temperature having a wired OR circuit, the
6 circuit combining the pulse-width-coded temperature signals.

1 3. A method for controlling one or more memory modules, comprising:

2 transmitting temperature signals from a first and second memory module to the
3 means for determining a highest temperature;
4 determining the highest temperature;
5 communicating the temperature signal corresponding to the highest temperature to
6 a memory control module;
7 evaluating the temperature signal corresponding to the highest temperature; and
8 initiating an adaptation operation, if the temperature of the highest memory
9 module exceeds a predetermined value.

1 4. The method as claimed in claim 3, wherein a number of commands per unit
2 time transmitted to the first and second memory modules is reduced by the adaptation
3 operation.

1 5. The method as claimed in claim 3, wherein the temperature in the first and
2 second memory modules is lowered by the adaptation operation activating a cooling unit
3 is activated.

1 6. The method as claimed in claim 3, wherein a number of memory refreshes
2 per unit time is increased by the adaptation operation.

1 7. The method as claimed in claim 3, wherein one of the memory modules is
2 deactivated in a predetermined manner by the adaptation operation.

1 8. The method as claimed in claim 3, wherein a system is ramped down in a
2 predetermined manner by the adaptation operation.

1 9. The method as claimed in claim 3, wherein the temperature is binary-coded.

1 10. The method as claimed in claim 3, wherein the temperature is converted into
2 a frequency-coded temperature signal.

1 11. The method as claimed in claim 3, wherein the temperature is converted into
2 a pulse-width-coded temperature signal.

1 12. The method as claimed in claim 3, wherein the temperature is converted into
2 an analog temperature signal.

1 13. A device for controlling one or more memory modules, comprising:
2 a first memory module with a temperature sensor for detecting the temperature of
3 the first memory module, the temperature sensor being arranged in the first memory
4 module;
5 a second memory module with a second temperature sensor for detecting the
6 temperature of the second memory module, the second temperature sensor being arranged
7 in the second memory module;
8 a measurer for determining a highest temperature; and
9 a memory control module, the memory control module being connected to the
10 first and second memory modules via the measurer, the memory control module being
11 designed such that an adaptation operation is initiated, if the highest temperature exceeds
12 a predetermined value.

1 14. The device as claimed in claim 13, wherein the first and second memory
2 modules having pulse width coders, the pulse width coders generating pulse-width-coded
3 temperature signals, the signals being connected upstream of the measurer, the measurer
4 having a wired OR circuit, the circuit combining the pulse-width-coded temperature
5 signals.

1 15. A method for controlling one or more memory modules, comprising:
2 transmitting temperature signals from a first and second memory module to the
3 measurer for determining a highest temperature;
4 determining the highest temperature;
5 communicating the temperature signal corresponding to the highest temperature to
6 a memory control module;
7 evaluating the temperature signal corresponding to the highest temperature; and
8 initiating an adaptation operation, if the temperature of the highest memory
9 module exceeds a predetermined value.

1 16. The method as claimed in claim 15, wherein a number of commands per unit
2 time transmitted to the first and second memory modules is reduced by the adaptation
3 operation.

1 17. The method as claimed in claim 15, wherein the temperature in the first and
2 second memory modules is lowered by the adaptation operation activating a cooling unit
3 is activated.

1 18. The method as claimed in claim 15, wherein a number of memory refreshes
2 per unit time is increased by the adaptation operation.

1 19. The method as claimed in claim 15, wherein one of the memory modules is
2 deactivated in a predetermined manner by the adaptation operation.

1 20. The method as claimed in claim 15, wherein a system is ramped down in a
2 predetermined manner by the adaptation operation.

1 21. The method as claimed in claim 15, wherein the temperature is binary-coded.

1 22. The method as claimed in claim 15, wherein the temperature is converted into
2 a frequency-coded temperature signal.

3 23. The method as claimed in claim 15, wherein the temperature is converted into
4 a pulse-width-coded temperature signal.

1 24. The method as claimed in claim 15, wherein the temperature is converted into
2 an analog temperature signal.